



# Clean Water State Revolving Fund (CWSRF) Requirements and Guidance for a Fiscal Sustainability Plan (FSP)

## Maine CWSRF Fiscal Sustainability Plan Requirements

Starting **October 1, 2014**, a Fiscal Sustainability Plan (FSP)<sup>1</sup> will be required of loan recipients for a project that involves the repair, replacement, or expansion of a treatment works. The FSP shall be documented in writing, with some components of the plan likely utilizing computerized asset management software.<sup>2</sup> The FSP shall be made available to Maine DEP staff for inspection at the loan recipient's office upon request. Loan recipients shall implement, maintain, and update the plan as appropriate, at least annually.

Early in the loan process and prior to the loan commitment date, the Department will consult with the loan applicant to establish the assets and planning area to be covered by the FSP. At a minimum, the planning area will cover the project(s) being funded and similar assets. For example, if the project is for the upgrade to a pumping station, the FSP planning area would include all pumping stations on a larger system and might include other assets like the sewers on a smaller system. The scope of the FSP will be determined by the Department with input from the loan recipient and agreed upon prior to loan commitment.

If the loan recipient has not previously developed and implemented an FSP meeting the CWSRF minimum requirements listed below, the loan recipient shall agree, prior to the loan closing date, to develop and implement a new FSP or a major updated FSP for the agreed upon asset planning area. The Agreement for a new or major update will include a deadline for submittal of the completed FSP, the signed Fiscal Sustainability Plan Certification (Appendix A), and the signed Water & Energy Conservation Certification (Appendix B) to the Department.

If the loan recipient has previously developed and implemented a complete FSP for their entire wastewater treatment system meeting the CWSRF minimum requirements listed below, the loan recipient shall agree, prior to the loan closing date, to develop and implement a minor update to their FSP to include the assets that will be constructed on the project(s) that are financed by the

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<sup>1</sup> FSPs are now required due to the passage of Federal Public Law 113-121, that amended Section 603(d)(1)(E) of the Federal Water Pollution Control Act.

<sup>2</sup> There are many commercially available asset management software programs. Programs should be selected based on specific facility needs. EPA has a free asset management program (CUPSS) designed for small facilities (less than 1,000 connections). It is available free of charge at <http://www.epa.gov/cupss/index.html>. Please contact the Maine DEP CWSRF program for information about free training resources for CUPSS.

loan. The Agreement for a minor update will include a deadline for submittal of the signed Fiscal Sustainability Plan Certification (Appendix A), and the signed Water & Energy Conservation Certification (Appendix B) to the Department.

The costs to develop and implement the FSP, including the purchase of computerized asset management software, staff training or the use of consultant services, are eligible expenses for CWSRF loan reimbursement.

**The CWSRF Fiscal Sustainability Plan shall contain:**

1. **Inventory of assets.** The FSP shall include an inventory of all critical assets<sup>3</sup> located in the FSP plan area. At a minimum, this will include: type of asset, installation date, estimated useful life, condition, and service history.
2. **Evaluation and Prioritization of Assets.** The plan shall include a system to evaluate the condition and performance and to prioritize the assets. This system should consider, at a minimum, the following asset characteristics: age, condition, service history, remaining useful life, importance to the protection of public health and/or water quality, importance to the operation of the system, and asset redundancy or lack thereof.
3. **Evaluation of Water and Energy Conservation Efforts.** Loan recipients shall certify that they have evaluated and will be implementing water and energy conservation efforts as part of the FSP. The evaluation of any projects identified in the FSP shall take into consideration water and energy conservation efforts. (Appendix B contains the *Water and Energy Conservation Certification* and Appendix C contains EPA's *Guidance on Evaluation and Implementation of Water and Energy Conservation Efforts*. Note: Some of the water and energy conservation efforts listed in the guidance might not be applicable to the FSP plan area defined by the Maine DEP.)
4. **Asset Management and Funding Plan.** The FSP shall include a plan and schedule for the maintenance, rehabilitation and/or replacement of assets and a plan for funding the activities. At a minimum, this should include the project descriptions, costs, timeframes, and potential funding sources. (See *Maine CWSRF FSP Guidance* below and Appendix D for a *Capital Improvement Plan Example*)

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<sup>3</sup> Critical assets to be included in the plan will depend on the complexity of the system and the type of assets and be established prior to loan commitment. Maine DEP will determine the appropriate information required in the FSP and the plan area on a case-by-case basis, with input from the loan recipient.

## **Maine CWSRF Fiscal Sustainability Plan Guidance**

The following guidance was developed by Maine DEP to assist the loan recipient in the development and implementation of a Fiscal Sustainability Plan.

**Fiscal Sustainability Planning** is a process similar to asset management planning that allows the loan recipient to get the most value from each asset and have the financial resources to continually provide established levels of service. In addition to the asset management components of inventorying, evaluating, and ranking critical assets; the FSP also looks at evaluating and implementing water and energy conservation efforts and developing a plan for funding the activities of the asset management plan. The FSP should be coordinated with the loan recipient's overall master planning documents and any other applicable studies, audits, and evaluations. Recommendations or findings in documents that could influence asset prioritization or plan scheduling may include: future treatment capacity needs, current and future permit compliance, excessive inflow and infiltration, operational inefficiency and shortfalls, safety concerns, and coordination with other scheduled utility and infrastructure maintenance.

Time and resources will be required to develop and implement the principles of fiscal sustainability planning. Fiscal sustainability planning needs to become an integral part of the organization's philosophy. Successful fiscal sustainability planning includes input and acceptance by the staff responsible for managing, operating, and maintaining the assets.

Successful fiscal sustainability planning will require the loan recipient to:

- Establish achievable level of service goals.
- Understand the assets available to achieve these goals.
- Identify areas of improvement.
- Determine the FSP scope of work.
- Create a plan to achieve specified goals.

**Level of Service** is essentially a benchmark used to establish performance goals. Levels of service may be based on user needs or desires, regulatory requirements, internal goals or other performance goals. Fiscal sustainability planning allows the loan recipient to create a consistent path toward reaching level of service goals, as well as a way to measure progress along the way.

**FSP Team** - Creating an FSP team is a good way to start the FSP discussion, establish the level of service goals, and help identify information and resources needed to develop and implement the FSP. By establishing an FSP team with a diverse background of skills and knowledge, a more complete and accurate plan can be developed in a timely manner. An FSP team ideally will consist of facility managers, decision-makers, operations and maintenance staff, financial and administrative staff, and consultants, as needed. Depending on the complexity of the system, the size of the staff, the resources available and the scope of the plan, the team may be smaller or larger, but it should at a minimum cover the knowledge areas necessary to develop an FSP that can achieve the desired level of service goals.

**Asset Condition Assessment** - One of the key steps to developing an FSP is to understand the condition of the system's assets. By identifying the condition of the assets, the loan recipient has the ability to evaluate them, either in comparison to similar assets or to standard performance expectations. A simple way to characterize and evaluate assets is to create an asset condition assessment system. An asset condition assessment system is a set of criteria created to consistently evaluate assets. The loan recipient assigns values or phrases to the assets with the understanding that those values or phrases have a pre-established meaning. By defining what these values or phrases mean, the owner can consistently evaluate their assets. There are a variety of ways to define the condition of the system's assets. Many computerized asset management software programs provide loan recipients the ability to select from multiple values and/or phrases that are assigned a specific weight during the asset prioritization portion of the FSP. It is left up to the loan recipient to determine what the values and phrases mean and when they should be assigned. Maine DEP recommends that the FSP team should determine which criteria it wants to record and what the conditions assigned to the assets mean before compiling an inventory of the assets to be managed.

**FSP Capital Improvement Plan (CIP)** – Proper management of the FSP will require a strategy for funding the recommended asset maintenance and replacement plan and schedule. A Capital Improvement Plan (CIP) is a tool commonly used by various organizations to outline when asset rehabilitation or replacement projects should take place and the amount of funds needed to accomplish them. A CIP is especially useful when proposing projects to a board, the ratepayers, or local government officials and may already be a requirement. The CIP helps demonstrate the organization's needs in a concise and non-technical format and helps decision-makers make better planning and financial decisions into the future. The CIP should capture, at a minimum, the FSP goals and funding requirements. An example CIP is included in Appendix D.

**FSP Maintenance** –It will not be enough to simply make an FSP and put it on the shelf. FSPs are considered “living documents” in the sense that they should be updated regularly to capture physical, organizational and financial changes. Whether it is an emergency repair, a new regulatory requirement, retirement of an asset, ratepayers' concern or changes in available funding, the CIP should reflect those changes as well. In addition, if the planning area of the initial FSP does not include the entire wastewater system, the planning area should evolve and expand over time to include the entire system.

# **APPENDIX A**

## **Fiscal Sustainability Plan Certification**



## Maine CWSRF Fiscal Sustainability Plan (FSP) Certification

Loan Recipient: \_\_\_\_\_ CWSRF Loan Number: \_\_\_\_\_

Project Name: \_\_\_\_\_

The passage of the *Water Resources Reform and Development Act (WRRDA) of 2014* makes significant changes to Titles I, II, V, and VI of the *Federal Water Pollution Control Act*, as amended. Effective October 1, 2014, all loan recipients proposing to repair, replace, or expand their treatment works are required to develop and implement a Fiscal Sustainability Plan (FSP).

As stated in section 603(d)(1)(E) of the *Federal Water Pollution Control Act*, as amended:

*“(E) for a treatment works proposed for repair, replacement, or expansion, and eligible for assistance under subsection (c)(1), the recipient of a loan shall –*

*(i) develop and implement a fiscal sustainability plan that includes –*

*(I) an inventory of critical assets that are part of the treatment works;*

*(II) an evaluation of the conditions and performance of inventoried assets or asset groupings;*

*(III) a certification that the recipient has evaluated and will be implementing water and energy conservation efforts as part of the plan; and*

*(IV) a plan for maintaining, repairing, and, as necessary, replacing the treatment works and a plan for funding such activities; or*

*(ii) certify that the recipient has developed and implemented a plan that meets requirements under clause (i);”*

I (name), \_\_\_\_\_, (title/position) \_\_\_\_\_, of (loan recipient) \_\_\_\_\_ hereby certify that to the best of my knowledge that the Fiscal Sustainability Plan has been developed consistent with the criteria contained in the *Maine CWSRF Requirements and Guidance for a Fiscal Sustainability Plan* and has been fully implemented for the agreed upon asset planning area as described in the FSP Agreement.

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

# **APPENDIX B**

## **Water and Energy Conservation Certification**



## Maine CWSRF Water and Energy Conservation Certification

Loan Recipient: \_\_\_\_\_ CWSRF Loan Number: \_\_\_\_\_

Project Name: \_\_\_\_\_

The passage of the *Water Resources Reform and Development Act* (WRRDA) of 2014 makes significant changes to Titles I, II, V, and VI of the *Federal Water Pollution Control Act*, as amended. Effective October 1, 2014, all loan recipients proposing to repair, replace, or expand their treatment works are required to develop and implement a Fiscal Sustainability Plan (FSP).

As stated in section 603(d)(1)(E)(i)(III) of the *Federal Water Pollution Control Act*, as amended, as part of the FSP, the recipient of a Clean Water State Revolving Fund loan is required to certify that water and energy conservation efforts have been evaluated and will be implemented.

*“(III) a certification that the recipient has evaluated and will be implementing water and energy conservation efforts as part of the plan; ...”*

I (*name*), \_\_\_\_\_, (*title/position*) \_\_\_\_\_, of (*loan recipient*) \_\_\_\_\_ hereby certify to the Maine Department of Environmental Protection that we have evaluated and will be implementing water and energy conservation efforts as part of the Fiscal Sustainability Plan.

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

# **APPENDIX C**

## **Guidance on Evaluation and Implementation of Water and Energy Conservation Efforts**

# Guidance on Evaluation and Implementation of Water and Energy Conservation Efforts

## Supplemental Information for Implementing Section 603(d)(1)(E)(i)(III)

Under Section 603(d)(1)(E)(i)(III) of the Federal Water Pollution Control Act, as amended, a recipient of a Clean Water State Revolving Fund (CWSRF) loan for “repair, replacement, or expansion” of a treatment works must certify that it has evaluated and will be implementing water and energy conservation efforts as part of its fiscal sustainability plan. As stated in *Initial Interpretative Guidance for Certain Amendments in the Water Resources Reform and Development Act to Titles I, II, V and VI of the Federal Water Pollution Control Act*, the Environmental Protection Agency recommends that the CWSRFs evaluate whether a recipient has selected, to the maximum extent practicable, water and energy efficient approaches in the selected project. (Please note that some of the following links might not continue to be active, however a search of EPA’s website should provide corrected links.)

### Energy Conservation

Energy assessments help utilities identify the amount of energy being used in various aspects of its operations. Energy audits, in turn, allow utilities to identify and prioritize projects that will result in operational and capital improvements to their infrastructure and operations, cost savings, and other climate-related benefits like reductions in greenhouse gas emissions and the use of renewable energy.

#### Energy Use Assessments

Several tools are available to help utilities conduct energy assessments, including:

**EPA’s Energy Use Assessment Tool** - this is a free Excel-based tool that can be downloaded and is specifically designed for small and medium sized wastewater and water utilities. It enables utilities to analyze their current energy bills and analyze energy consumption for major pieces of equipment. It also allows the utility to develop a printable summary report outlining current energy consumption and costs, generate graphs depicting energy use over time, and highlight areas of potential improvement in energy efficiency. It is available at

[http://water.epa.gov/infrastructure/sustain/energy\\_use.cfm](http://water.epa.gov/infrastructure/sustain/energy_use.cfm)

**NYSERDA Energy Benchmarking Tool** - The New York State Energy Research and Development Agency (NYSERDA) has developed a tool to help wastewater utilities assess and benchmark their current energy usage, along with a number of other useful self-audit checklists, available at <http://www.nyserda.ny.gov/Energy-Efficiency-and-Renewable-Programs/Commercial-and-Industrial/Sectors/Municipal-Water-and-Wastewater.aspx>

## Energy Audits

Energy audits can be broadly characterized according to the following three levels:

- Level 1 (Walk Through Audits)
  - Generally last several hours at the facility
  - Usually result in suggestions of low cost improvements in areas like HVAC or lighting
- Level 2 (Energy Survey and Analysis Audits)
  - One or two days in duration, plus additional time to review energy bills, etc.
  - In addition to HVAC/lighting recommendations, usually result in recommendations for equipment upgrades in existing processes (e.g., variable frequency drives, more efficient motors, etc.)
- Level 3 (Process Energy Audit)
  - One or more days at the facility, time to analyze energy bills and pump curves, and time for additional data gathering
  - Audit covers energy use in both existing and alternative processes, potential design modifications, and optimization of processes and equipment
  - Audit suggestions covered detailed operational and process suggestions for both short-term and long-term payback periods as well as capital intensive projects that may require outside funding
  - Most likely to result in significant savings

EPA hosted a webinar in August 2014 describing a number of energy assessment and audit tools available to states and potential recipients of CWSRF funding. The webinar slides are available at <http://water.epa.gov/infrastructure/sustain/upload/NRWA-Energy-Audits-for-Small-Utilities-8-4-14.pdf>

Tools available to help wastewater utilities obtain or conduct energy audits include:

- **EPA's Energy Use Assessment Tool**—described in more detail above. Available at [http://water.epa.gov/infrastructure/sustain/energy\\_use.cfm](http://water.epa.gov/infrastructure/sustain/energy_use.cfm)
- **EPRI Energy Audit Manual for Water and Wastewater Facilities**—available at [www.cee1.org/ind/mot-sys/ww/epri-audit.pdf](http://www.cee1.org/ind/mot-sys/ww/epri-audit.pdf)
- **Maine DEP Sample Audit RFP Language**—designed to help utilities obtain assistance for Level 3 Audits, available at [http://www.maine.gov/dep/water/grants/SRF/2014/model\\_energy\\_audit\\_rfp.pdf](http://www.maine.gov/dep/water/grants/SRF/2014/model_energy_audit_rfp.pdf)
- **The Center for Energy Efficiency (CEE) self-audit checklists**—available at [www.cee1.org/ind/mot-sys/ww/epri-audit.pdf](http://www.cee1.org/ind/mot-sys/ww/epri-audit.pdf)
- **Ensuring a Sustainable Future: An Energy Management Guidebook for Wastewater and Water Utilities**—available at [http://www.epa.gov/waterinfrastructure/pdfs/guidebook\\_si\\_energymangement.pdf](http://www.epa.gov/waterinfrastructure/pdfs/guidebook_si_energymangement.pdf)

Both energy assessments and audits are eligible for funding under the CWSRF, and several organizations can help utilities with these activities, including:

- State Energy Offices (<http://www.naseo.org/members-states>)
- Electric utilities serving wastewater utilities (<http://www.dsireusa.org/>)
- Technical assistance providers like the National Rural Water Association, RCAP, and others
- Department of Energy Industrial Assessment Centers (<http://energy.gov/eere/amo/industrial-assessment-centers-iacs>).

### **Water Conservation**

Water conservation includes efficiency and reuse efforts to not only conserve our raw water supply, but to also reduce flow to wastewater treatment plants. Therefore, one way CWSRF borrowers can fulfill the water conservation requirement is to consider alternative or complementary projects that result in reduced wastewater flows and therefore reduce a treatment works' capacity needs. There are a number of water conservation projects borrowers can consider, including:

- **Water Reuse**—recycling and water reuse projects that replace potable sources with non-potable sources [possible water reuse conservation elements]:
  - Gray water, condensate, and wastewater effluent reuse systems
  - Extra treatment costs and distribution pipes associated with water reuse
- **Water Efficient Devices**—installing or retrofitting water efficient devices, such as plumbing fixtures and appliances [possible water efficient devices conservation elements]:
  - Shower heads, faucets, toilets, urinals, etc.
  - Education and incentive programs to conserve water such as rebates
- **Water Meters**—installing any type of water meter in a previously unmetred area, or replacing existing broken/malfunctioning water meters or upgrading them if rate structure is based on metered use
- **Water Audits and Conservation Plans**—performing audits of entire utilities or individual users (e.g., large corporations) to assess the amount of water being consumed, the need for retrofits, etc.

Utilities can also fulfill this requirement by considering water conservation projects that are not CWSRF eligible.

## Water Efficiency Tools

Tools are readily available to help utilities determine how much water is being conserved, including:

- **EPA’s WaterSense Program**—Tools and resources to promote water efficiency are available at <http://www.epa.gov/watersense/>. States, local governments, and utilities can partner with WaterSense to get access to additional tools and resources to help them design and implement water efficiency and conservation programs. Partnership is free.
- **EPA’s Water Conservation Plan Guidelines**—Helpful recommendations to utilities for creating and implementing a Water Conservation Plan, depending on the size of the population served by the utility, available at <http://epa.gov/watersense/pubs/guide.html>
- **AWWA Water Audit Software**—Free software specifically designed to help utilities perform water audits, to help quantify and track water losses, and determine areas for improved efficiency. Available at <http://www.awwa.org/resources-tools/waterknowledge/water-loss-control.aspx>
- **AWE Water Conservation Tracking Tool**—A tool to evaluate water savings, costs, and benefits of conservation programs for a specific water utility, available to AWE members at <http://www.allianceforwaterefficiency.org/tracking-tool.aspx>
- Many states have guidelines and example plans to help utilities develop water conservation plans. For example:

**TWDB Water Conservation Plan**—Texas Water Development Board has developed a set of guidelines, tutorials, and example plans to help utilities create a water conservation plan that can be adopted and utilized by different entities.

Available at <http://www.twdb.texas.gov/conservation/municipal/plans/>

# **APPENDIX D**

## **Capital Improvement Plan Example**

## CAPITAL IMPROVEMENT PLAN EXAMPLE

Year Desired	Project Name	Project Description	Project Need	Is the date flexible? (Y or N)	Project Cost Estimate	Estimation Method	Potential Funding Source(s)	Operations Adjustments	LOS impact
2015	Downtown pump station replacement	Replace 40 year old dry-well wet-well pump with surface mounted pump package	Old pumps and electrical equipment frequently malfunction; pumps are not pumping efficiently	No. This pump station is critical to downtown businesses and does not have redundancy	\$178,800	Consultant's sewer system evaluation study	40% SRF loan; 50% CDBG grant 10% from revenues	Operator training with new pumping equipment will be required	This will improve the pumping reliability in the downtown area and reduce customer complaints from sewer backups
2016	None								
2017	None								
2018	District vacuum truck replacement	Replace District vacuum truck that is 15 years old with new truck	Old truck needs constant repairs; parts are no longer manufactured	Yes, but needs to be replaced within 1 to 2 years	\$104,250	Listing price from vacuum truck manufacturer's stock catalog	100% commercial bank loan	None	Will allow secondary treatment and collection system to operate efficiently; increases cleanup responsiveness
	Long Road sewer replacement	Replace 1200 LF of sewer main and 6 manholes along Long Rd.	Clay sewer main pipe is 50+ years old; cracked and leaking pipe is causing I/I issues for treatment plant	Yes. Project could be delayed up to 1 year	\$683,200	Consultant's estimate	70% RD grant; 30% from capital reserves	None	Project will help achieve LOS goal to decrease treatment plant energy costs
2019	None								

Year Desired	Project Name	Project Description	Project Need	Is the date flexible? (Y or N)	Project Cost Estimate	Estimation Method	Potential Funding Source(s)	Operations Adjustments	LOS impact
2020	None								
2021	None								
2022	Small Creek brick manhole replacement	Cap off CSO outfall line intake to manhole and replace leaking brick manhole with new reinforced concrete manhole	This project is required by the District's CSO Master Plan and discharge permit	No. This project must meet date for regulatory requirements	\$292,000	Cost neighboring sewer district paid for brick manhole replacement with reinforced concrete manhole	90% CDBG grant; 10% capital reserves	None.	Project will allow system to meet LOS requirement to be in compliance with regulatory standards
2023	None								
2024	Aeration Lagoon #1 dredging	Aeration Lagoon #1 is in need of dredging to maintain operability	Aeration lagoons require routine dredging every 5-10 years	No. This project will be required to continue proper operation of Lagoon #1	\$564,050	Based on historical dredging cost including inflation index	80% SRF loan; 20% CDBG grant	Flow will need to be diverted to Lagoon #3 during dewatering and dredging	Will maintain LOS goal of regulatory compliance
2025	None								
2026	None								
2027	WWTP disinfection house upgrade	Expand disinfection house to accommodate additional chemical mixing tank	Equipment has been well maintained but is reaching end of useful life; redundancy is needed	Yes. Project can be delayed up to 1 or 2 years, but risks equipment failure and permit violation	\$421,600	Consultant's estimate	70% SRF loan; 30% capital reserve funds	New disinfection tank and equipment should be rotated into operation periodically	Will maintain LOS goal of regulatory compliance
Total					\$2,243,900				

